

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
7 April 2005 (07.04.2005)

PCT

(10) International Publication Number
WO 2005/031906 A1

(51) International Patent Classification⁷: **H01M 8/10**

(21) International Application Number:
PCT/EP2004/010252

(22) International Filing Date:
14 September 2004 (14.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03021845.7 26 September 2003 (26.09.2003) EP
03028850.0 16 December 2003 (16.12.2003) EP

(71) Applicant (for all designated States except US): **PAUL SCHERRER INSTITUT [CH/CH]; CH-5232 Villigen PSI (CH).**

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BRACK, Hans-Peter [CH/CH]; Schulhausstrasse 64, CH-8704 Herrliberg (CH). SCHERER, Günther, G. [DE/CH]; Talackerstrasse 19b, CH-5607 Hägglingen (CH). GUBLER, Lorenz [CH/CH]; Schulstrasse 3, CH-5415 Nussbaumen (CH).**

(74) Agent: **FISCHER, Michael; Siemens AG, Postfach 22 16 34, 80506 München (DE).**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **MEMBRANE ELECTRODE ASSEMBLY (MEA), METHODE FOR ITS MANUFACTURING AND A METHOD FOR PREPARING A MEMBRANE TO BE ASSEMBLED IN A MEA**

(57) Abstract: A method for preparing a membrane to be assembled in a membrane, electrode assembly is disclosed comprising the step of swelling an ion-conducting membrane in a liquid containing at least one solvent or to an atmosphere containing the vapor phase of at least one solvent by controlling the content of the solvent in the ion conducting membrane. Further, a method for manufacturing a membrane electrode assembly using a ion conducting membrane is disclosed, comprising the steps of: providing a ion conducting membrane in a pre-swollen state; coating of the ion conducting membrane on both sides with an electrode layer to form a sandwich; and hot-pressing the sandwich to form an ion conducting bonding of the afore-mentioned layers of the sandwich. Furthermore, a membrane electrode assembly is disclosed comprising a hot pressed sandwich comprising an electrode layer, a ion conducting membrane and again an electrode layer, thereby using the ion conducting membrane in its pre-swollen status prior to the hot-pressing.



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